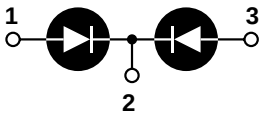
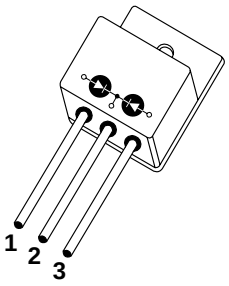


1 - Anode 1
2 - Common Cathode
3 - Anode 2



ADVANCED POWER TECHNOLOGY®

APT30D20HCT 200V 2x30A

ULTRAFAST SOFT RECOVERY RECTIFIER DIODES

PRODUCT APPLICATIONS

- Parallel Diode
  - -Switchmode Power Supply
  - -Inverters
- Free Wheeling Diode
  - -Motor Controllers
  - -Converters
- Snubber Diode
- Uninterruptible Power Supply (UPS)
- Induction Heating
- High Speed Rectifiers

PRODUCT FEATURES

- Ultrafast Recovery Times
- Soft Recovery Characteristics
- Hermetic TO-258 Package
- Low Forward Voltage
- High Blocking Voltage
- Low Leakage Current

PRODUCT BENEFITS

- Low Losses
- Low Noise Switching
- Cooler Operation
- Higher Reliability Systems
- Increased System Power Density

MAXIMUM RATINGS All Ratings Are Per Leg: T_C = 25°C unless otherwise specified.

Symbol	Characteristic / Test Conditions	APT30D20HCT	UNIT
V_R	Maximum D.C. Reverse Voltage	200	Volts
V_{RRM}	Maximum Peak Repetitive Reverse Voltage		
V_{RWM}	Maximum Working Peak Reverse Voltage		
$I_F(AV)$	Maximum Average Forward Current (T_C = 85°C, Duty Cycle = 0.5)	30	Amps
$I_F(RMS)$	RMS Forward Current	70	
I_{FSM}	Non-Repetitive Forward Surge Current (T_J = 45°C, 8.3ms)	320	
T_J,T_{STG}	Operating and StorageTemperature Range	-55 to 150	°C
T_L	Lead Temperature: 0.063" from Case for 10 Sec.	300	

STATIC ELECTRICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions		MIN	TYP	MAX	UNIT
V_F	Maximum Forward Voltage	I_F = 30A			1.45	Volts
		I_F = 60A		1.42		
		I_F = 30A, T_J = 150°C			1.3	
I_{RM}	Maximum Reverse Leakage Current	V_R = V_R Rated			250	µA
		V_R = V_R Rated, T_J = 125°C			500	
C_T	Junction Capacitance, V_R = 150V			110		pF
L_S	Series Inductance (Lead to Lead 5mm from Base)			TBD		nH

APT Website - http://www.advancedpower.com

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EUROPE
Avenue J.F. Kennedy Bât B4 Parc Cadéra Nord F-33700 Merignac - France Phone: (33) 5 57 92 15 15 FAX: (33) 5 56 47 97 61

053-2008 Rev -

DYNAMIC CHARACTERISTICS

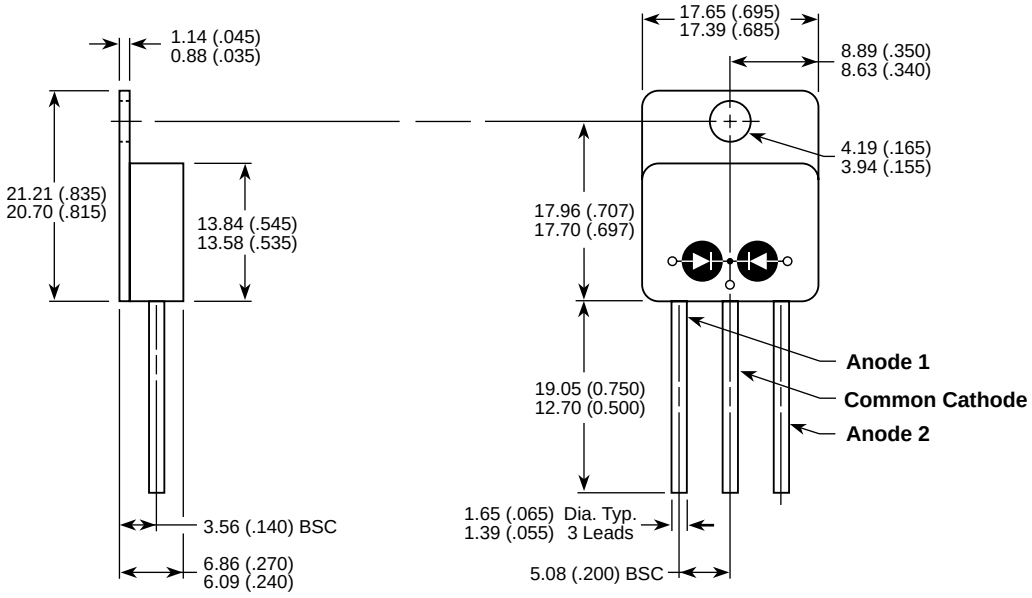
Symbol	Characteristic		MIN	TYP	MAX	UNIT
t_{rr1}	Reverse Recovery Time, I_F = 1.0A, di_F/dt = -15A/µs, V_R = 30V, T_J = 25°C			35	50	ns
t_{rr2}	Reverse Recovery Time	T_J = 25°C		40		
t_{rr3}	I_F = 30A, di_F/dt = -240A/µs, V_R = 100V	T_J = 100°C		60		
t_{fr1}	Forward Recovery Time	T_J = 25°C		155		
t_{fr2}	I_F = 30A, di_F/dt = 240A/µs, V_R = 100V	T_J = 100°C		155		
I_{RRM1}	Reverse Recovery Current	T_J = 25°C		6	8	Amps
I_{RRM2}	I_F = 30A, di_F/dt = -240A/µs, V_R = 100V	T_J = 100°C		10	13	
Q_{rr1}	Recovery Charge	T_J = 25°C		120		nC
Q_{rr2}	I_F = 30A, di_F/dt = -240A/µs, V_R = 100V	T_J = 100°C		300		
V_{fr1}	Forward Recovery Voltage	T_J = 25°C		2.5		Volts
V_{fr2}	I_F = 30A, di_F/dt = 240A/µs, V_R = 100V	T_J = 100°C		2.5		
diM/dt	Rate of Fall of Recovery Current	T_J = 25°C		300		A/µs
	I_F = 30A, di_F/dt = -240A/µs, V_R = 100V (See Figure 10)	T_J = 100°C		600		

THERMAL AND MECHANICAL CHARACTERISTICS

Symbol	Characteristic / Test Conditions	MIN	TYP	MAX	UNIT
$R_{\theta JC}$	Junction-to-Case Thermal Resistance			0.95	°C/W
$R_{\theta JA}$	Junction-to-Ambient Thermal Resistance			40	

APT Reserves the right to change, without notice, the specifications and information contained herein.

TO-258AA Package Outline



Dimensions in Millimeters and (Inches)

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